

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:

10/561,681

Source:

TEWP

Date Processed by STIC:

01/11/2007

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.4.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. **EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>) , EFS Submission User Manual - ePAVE)**
2. **U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**
3. **Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05): U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314**

Revised 01/10/06



IFWP

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/561,691

DATE: 01/11/2007

TIME: 10:31:01

Input Set : A:\Sequence Listing 36759-20005.00.txt
 Output Set: N:\CRF4\01112007\J561691.raw

```

4 <110> APPLICANT: Kazakov, Sergei A.
5     Dallas, Anne
6     Kuo, Tai-Chih
7     Johnston, Brian H.
9 <120> TITLE OF INVENTION: Polynucleotides Capable of
10    Target-Dependent Circularization and Topological Linkage
13 <130> FILE REFERENCE: 367592000500
15 <140> CURRENT APPLICATION NUMBER: 10/561,691
16 <141> CURRENT FILING DATE: 2005-12-21
18 <150> PRIOR APPLICATION NUMBER: PCT/US2004/020589
19 <151> PRIOR FILING DATE: 2004-06-25
21 <150> PRIOR APPLICATION NUMBER: US 60/482,653
22 <151> PRIOR FILING DATE: 2003-06-25
24 <160> NUMBER OF SEQ ID NOS: 50
26 <170> SOFTWARE: FastSEQ for Windows Version 4.0
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 74
30 <212> TYPE: DNA
31 <213> ORGANISM: Artificial Sequence
33 <220> FEATURE:
34 <223> OTHER INFORMATION: Synthetic Construct
36 <400> SEQUENCE: 1
37 cgtccgtatg acgagagaag ctgaccagag aaacacacga cgtaagtctgt ggtacattac 60
38 ctggtaacag aggc                               74
40 <210> SEQ ID NO: 2
41 <211> LENGTH: 69
42 <212> TYPE: DNA
43 <213> ORGANISM: Artificial Sequence
45 <220> FEATURE:
46 <223> OTHER INFORMATION: Synthetic Construct
48 <400> SEQUENCE: 2
49 tgttgttgg ttttgttgc tgccatgtc tcagcctctg ttaccaggta atgtaccacg 60
50 acttacgtc                               69
52 <210> SEQ ID NO: 3
53 <211> LENGTH: 51
54 <212> TYPE: DNA
55 <213> ORGANISM: Artificial Sequence
57 <220> FEATURE:
58 <223> OTHER INFORMATION: Synthetic Construct
60 <400> SEQUENCE: 3
61 taatacgact cactataggg cagccgtcct cgtccgtatg acgagagaag c      51
63 <210> SEQ ID NO: 4
64 <211> LENGTH: 45

```

Does Not Comply
 Corrected Diskette Needed
 Cpt-3?

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/561,691

DATE: 01/11/2007

TIME: 10:31:01

Input Set : A:\Sequence Listing 36759-20005.00.txt
 Output Set: N:\CRF4\01112007\J561691.raw

```

65 <212> TYPE: DNA
66 <213> ORGANISM: Artificial Sequence
68 <220> FEATURE:
69 <223> OTHER INFORMATION: Synthetic Construct
71 <400> SEQUENCE: 4
72 tatgacgagg acggctggtt gttgttgttg ttgttgttgc 45
74 <210> SEQ ID NO: 5
75 <211> LENGTH: 45
76 <212> TYPE: DNA
77 <213> ORGANISM: Artificial Sequence
79 <220> FEATURE:
80 <223> OTHER INFORMATION: Synthetic Construct
82 <400> SEQUENCE: 5
83 tatgacgagg acggctgatt gttgttgttg ttgttgttgc 45
85 <210> SEQ ID NO: 6
86 <211> LENGTH: 45
87 <212> TYPE: DNA
88 <213> ORGANISM: Artificial Sequence
90 <220> FEATURE:
91 <223> OTHER INFORMATION: Synthetic Construct
93 <400> SEQUENCE: 6
94 tatgacgagg acggctgagt gttgttgttg ttgttgttgc 45
96 <210> SEQ ID NO: 7
97 <211> LENGTH: 45
98 <212> TYPE: DNA
99 <213> ORGANISM: Artificial Sequence
101 <220> FEATURE:
102 <223> OTHER INFORMATION: Synthetic Construct
104 <400> SEQUENCE: 7
105 tatgacgagg acggctgaga gttgttgttg ttgttgttgc 45
107 <210> SEQ ID NO: 8
108 <211> LENGTH: 45
109 <212> TYPE: DNA
110 <213> ORGANISM: Artificial Sequence
112 <220> FEATURE:
113 <223> OTHER INFORMATION: Synthetic Construct
115 <400> SEQUENCE: 8
116 tatgacgagg acggctgaga cttgttgttg ttgttgttgc 45
118 <210> SEQ ID NO: 9
119 <211> LENGTH: 45
120 <212> TYPE: DNA
121 <213> ORGANISM: Artificial Sequence
123 <220> FEATURE:
124 <223> OTHER INFORMATION: Synthetic Construct
126 <400> SEQUENCE: 9
127 tatgacgagg acggctgaga catgttgttg ttgttgttgc 45
129 <210> SEQ ID NO: 10
130 <211> LENGTH: 17
131 <212> TYPE: DNA

```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/561,691

DATE: 01/11/2007
TIME: 10:31:01

Input Set : A:\Sequence Listing 36759-20005.00.txt
Output Set: N:\CRF4\01112007\J561691.raw

132 <213> ORGANISM: Artificial Sequence
 134 <220> FEATURE:
 135 <223> OTHER INFORMATION: Synthetic Construct
 137 <400> SEQUENCE: 10
 138 gcttctctcg tcatacg 17
 140 <210> SEQ ID NO: 11
 141 <211> LENGTH: 28
 142 <212> TYPE: DNA
 143 <213> ORGANISM: Artificial Sequence
 145 <220> FEATURE:
 146 <223> OTHER INFORMATION: Synthetic Construct
 148 <400> SEQUENCE: 11
 149 taatacgaact cactataggg cagccgtc 28
 151 <210> SEQ ID NO: 12
 152 <211> LENGTH: 29
 153 <212> TYPE: DNA
 154 <213> ORGANISM: Artificial Sequence
 156 <220> FEATURE:
 157 <223> OTHER INFORMATION: Synthetic Construct
 159 <400> SEQUENCE: 12
 160 ggtgacacta ttagtgcataat gacgaggac 29
 162 <210> SEQ ID NO: 13
 163 <211> LENGTH: 59
 164 <212> TYPE: RNA
 165 <213> ORGANISM: Artificial Sequence
 167 <220> FEATURE:
 168 <223> OTHER INFORMATION: Synthetic Construct
 W--> 170 <221> NAME/KEY: misc_feature
 171 <222> LOCATION: 1-5, 10, 13-19, 27-35, 41-48, 54, 56-60
 172 <223> OTHER INFORMATION: n = A, U, G or C
 W--> 174 <221> misc_feature
 175 <222> LOCATION: 6
 176 <223> OTHER INFORMATION: n = U, C or G
 W--> 178 <221> misc_feature
 179 <222> LOCATION: 7, 11, 49
 180 <223> OTHER INFORMATION: n = U or C
 W--> 182 <221> misc_feature
 183 <222> LOCATION: 8, 25
 184 <223> OTHER INFORMATION: n = A, C or U
 W--> 186 <221> misc_feature
 187 <222> LOCATION: 12
 188 <223> OTHER INFORMATION: n = A or G
 W--> 190 <221> misc_feature
 191 <222> LOCATION: (55)...(55)
 192 <223> OTHER INFORMATION: n = A, C or G
 W--> 194 <400> 13
 W--> 195 nnnnnnnnngn nnnnnnnnca uuananhnnn nnnncaagn nnnnnnnnnga agnnnnnnn 59
 197 <210> SEQ ID NO: 14
 198 <211> LENGTH: 22

'c' at this location

'c' at this location

'a' at this location

'n' at 40

'n' at this location

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/561,691

DATE: 01/11/2007

TIME: 10:31:01

Input Set : A:\Sequence Listing 36759-20005.00.txt
 Output Set: N:\CRF4\01112007\J561691.raw

```

199 <212> TYPE: RNA
200 <213> ORGANISM: Artificial Sequence
202 <220> FEATURE:
203 <223> OTHER INFORMATION: Synthetic Construct
205 <400> SEQUENCE: 14
206 ucggaaacagg gaacuucucu ug 22
208 <210> SEQ ID NO: 15
209 <211> LENGTH: 119
210 <212> TYPE: RNA
211 <213> ORGANISM: Artificial Sequence
213 <220> FEATURE:
214 <223> OTHER INFORMATION: Synthetic Construct
216 <400> SEQUENCE: 15
217 ccagucaaga gaaguuccu guuccgagcc cuuuuuuuucc uugucccuug aagagaacug 60
218 guccauuaaua ugguguugca cacaagaga ccaacugaag agacaguaug ccuguccug 119
220 <210> SEQ ID NO: 16
221 <211> LENGTH: 139
222 <212> TYPE: RNA
223 <213> ORGANISM: Artificial Sequence
225 <220> FEATURE:
226 <223> OTHER INFORMATION: Synthetic Construct
W--> 228 <221> NAME/KEY: misc_feature
229 <222> LOCATION: (39)...(58)
230 <223> OTHER INFORMATION: n = A, G, C or U
W--> 232 <400> 16
W--> 233 cugcuccugc cgaccaacaa caacaacaac aaauaagagnn nnnnnnnnnnn nnnnnnnnnca 60
234 augguccauu acaugugucu gaaugcagca cacaagaga ccagucgaag agagcaguau 120
235 gccugccuu gccgacggg 139
237 <210> SEQ ID NO: 17
238 <211> LENGTH: 122
239 <212> TYPE: RNA
240 <213> ORGANISM: Artificial Sequence
242 <220> FEATURE:
243 <223> OTHER INFORMATION: Synthetic Construct
W--> 245 <221> NAME/KEY: misc_feature
246 <222> LOCATION: (30)...(49)
247 <223> OTHER INFORMATION: n = A, G, C or U
W--> 249 <400> 17
W--> 250 ccgacccaaca acaacaacaa caauaagagn nnnnnnnnnnn nnnnnnnnnnc aaugguccau 60
251 uacauggugc ugaauugcagc acacaaagag accagucgaa gagagcagua ugcugcucc 120
252 ug 122
254 <210> SEQ ID NO: 18
255 <211> LENGTH: 142
256 <212> TYPE: RNA
257 <213> ORGANISM: Artificial Sequence
259 <220> FEATURE:
260 <223> OTHER INFORMATION: Synthetic Construct
W--> 262 <221> NAME/KEY: misc_feature
263 <222> LOCATION: (18)...(22)

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/10/561,691

DATE: 01/11/2007
 TIME: 10:31:01

Input Set : A:\Sequence Listing 36759-20005.00.txt
 Output Set: N:\CRF4\01112007\J561691.raw

264 <223> OTHER INFORMATION: n = A, C, G or U
 W--> 266 <400> 18
 W--> 267 auacugcucc ugccgacnnn nnacaacaac aacaacaaca acacggauac agagucggag 60
 268 acaauggucc auuacauggu gcugaaugca gcacacaaag agaccagucg aagagaccug 120
 269 uaugccaggu ccugccgacg gg 142
 271 <210> SEQ ID NO: 19
 272 <211> LENGTH: 10
 273 <212> TYPE: RNA
 274 <213> ORGANISM: Artificial Sequence
 276 <220> FEATURE:
 277 <223> OTHER INFORMATION: Synthetic Construct
 279 <400> SEQUENCE: 19
 280 ccgacucugu 10
 282 <210> SEQ ID NO: 20
 283 <211> LENGTH: 10
 284 <212> TYPE: RNA
 285 <213> ORGANISM: Artificial Sequence
 287 <220> FEATURE:
 288 <223> OTHER INFORMATION: Synthetic Construct
 290 <400> SEQUENCE: 20
 291 ccgacucuga 10
 293 <210> SEQ ID NO: 21
 294 <211> LENGTH: 10
 295 <212> TYPE: RNA
 296 <213> ORGANISM: Artificial Sequence
 298 <220> FEATURE:
 299 <223> OTHER INFORMATION: Synthetic Construct
 301 <400> SEQUENCE: 21
 302 ccgacucuca 10
 304 <210> SEQ ID NO: 22
 305 <211> LENGTH: 10
 306 <212> TYPE: RNA
 307 <213> ORGANISM: Artificial Sequence
 309 <220> FEATURE:
 310 <223> OTHER INFORMATION: Synthetic Construct
 312 <400> SEQUENCE: 22
 313 ccgacucaca 10
 315 <210> SEQ ID NO: 23
 316 <211> LENGTH: 10
 317 <212> TYPE: RNA
 318 <213> ORGANISM: Artificial Sequence
 320 <220> FEATURE:
 321 <223> OTHER INFORMATION: Synthetic Construct
 323 <400> SEQUENCE: 23
 324 ccgacuaaca 10
 326 <210> SEQ ID NO: 24
 327 <211> LENGTH: 10
 328 <212> TYPE: RNA
 329 <213> ORGANISM: Artificial Sequence

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/561,691

DATE: 01/11/2007
TIME: 10:31:02

Input Set : A:\Sequence Listing 36759-20005.00.txt
Output Set: N:\CRF4\01112007\J561691.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:13; N Pos. 1,2,3,4,5,6,7,8,10,11,12,13,14,15,16,17,18,24,26,27,28,29

Seq#:13; N Pos. 30,31,32,33,34,40,41,42,43,44,45,46,47,48,53,54,55,56,57,58

Seq#:13; N Pos. 59

Seq#:16; N Pos. 39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58

Seq#:17; N Pos. 30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49

Seq#:18; N Pos. 18,19,20,21,22

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/561,691

DATE: 01/11/2007

TIME: 10:31:02

Input Set : A:\Sequence Listing 36759-20005.00.txt
Output Set: N:\CRF4\01112007\J561691.raw

L:170 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:174 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:178 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:182 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:186 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:190 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:194 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:195 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:228 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:232 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:16
L:233 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:245 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:249 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17
L:250 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:262 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:266 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18
L:267 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0